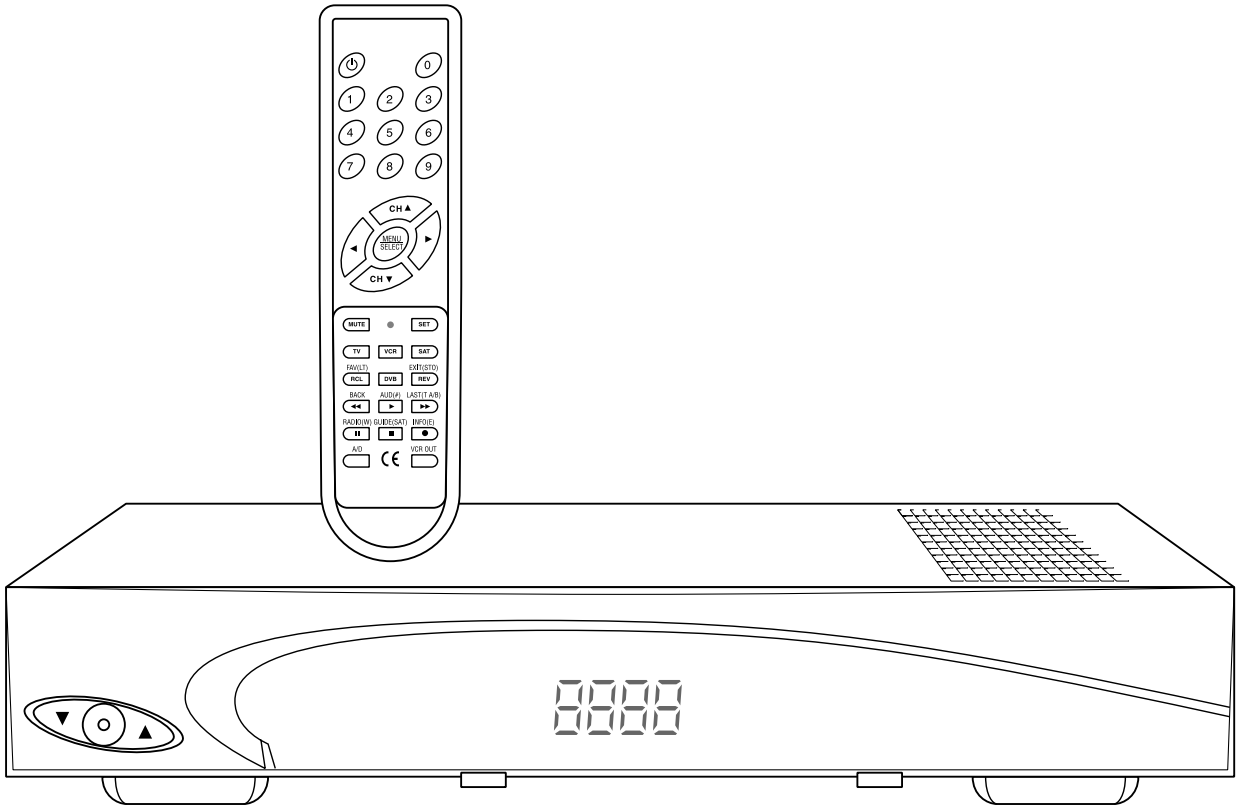
RADIX
TELECOMMUNICATION

Instruction Manual

EPSILON 2AD
DIGITAL SATELLITE RECEIVER



Read this instruction manual through carefully first. • Keep it handy for future reference.
Abuse or improper operation of the unit will void the warranty.

RADIX Electronic Vertriebs-GmbH • D-61381 Friedrichsdorf • F.R. Germany

1 Introduction

Congratulations on your decision to purchase a RADIX digital satellite receiver. All of our manufacturing facilities have been certified under the stringent ISO 9002 quality standard.

If the unit must be sent in for repair, repack it and all of its associated accessory items in their original packagings, which should be kept on hand for this purpose. Enclose a copy of the sales invoice or sales slip, along with a detailed description of the problem(s) involved, and ship the unit to us with all shipping charges prepaid.

With your purchase of our EPSILON 2 A/D digital satellite receiver you are ready for the future, since digital television will become the standard and replace analog television broadcasting due to the wide variety of programming that may be transmitted and the numerous supplementary services if offers, such as an onscreen electronic program-selection guide.

Our EPSILON 2 A/D digital satellite receiver is capable of receiving both analog and digital television broadcasts.

You may use the universal remote control supplied with the unit for controlling analog satellite receivers, other digital satellite receivers, television sets, and video recorders.

We wish you many years of enjoyment and trouble-free service from our product.

Publisher's statement:

EPSILON 2 AD Instruction Manual
RADIX Electronic Vertriebs-GmbH • D-61381 Friedrichsdorf • F.R. Germany

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3 Safety Precautions

This receiver is intended exclusively for the reception of satellite broadcasts, and should be used for that purpose only. Keep the receiver out of children's reach. In the interest of your own personal safety and preventing damage to the receiver, you should observe the following precautions:

DANGER:
Do not open its housing's cover panel, since that will expose sources of electric-shock hazards. All work on the receiver should be performed by authorized specialists only.

DANGER:
Keep the receiver dry and well-protected against ingress of moisture, since if any moisture enters the receiver, that might create electric-shock hazards.

DANGER:
Do not insert any objects into any openings or ventilation louvres on the receiver's housing, since that will subject you to electric-shock hazards.

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WARNING:
Make certain that the ventilation louvres on the receiver's housing remain unobstructed at all times, since otherwise the receiver might overheat and catch fire.

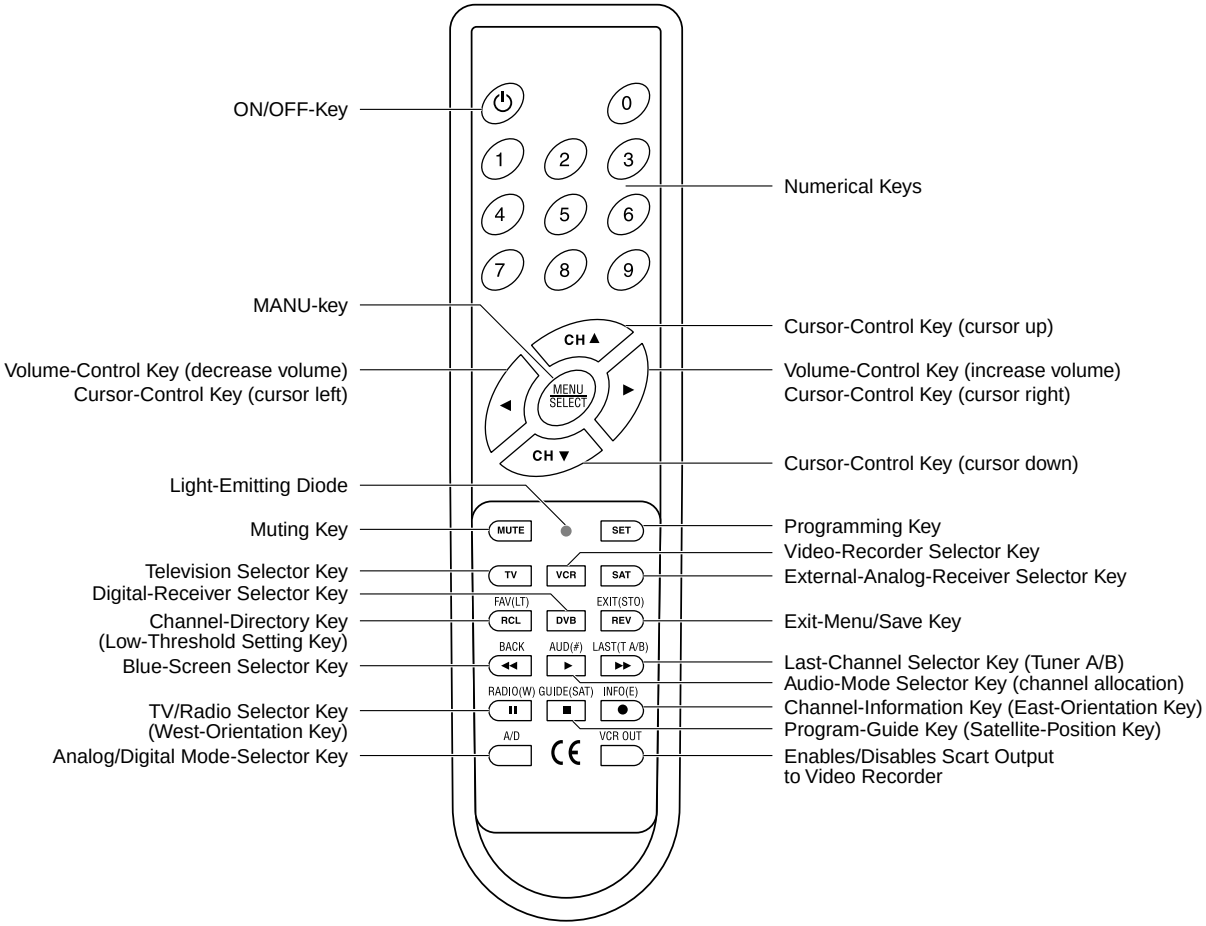
WARNING:
Use only factory-original replacement parts or such recommended by your dealer, since using any other parts might result in personal injuries and/or property damage. Failure to observe this warning will void the equipment warranty.

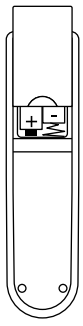
NOTE:
Switch the receiver off during thunderstorms and whenever it remains out of service for extended periods.

NOTE:
To clean the receiver, wipe it off with a damp cloth only. Do not use any chemical cleaners.

4 The Receiver and Its Operation

4.1 The Remote Control





Designations enclosed in parentheses apply to both the analog-receiver section and the antenna controller (an optional accessory item).

NOTE:
When inserting the batteries into the remote control, make certain that they are inserted with the correct polarity.

Key Marking(s)	Color	Function During: Operation	Installation
⏻	red	ON/OFF-switch	ON/OFF-switch
0,1,2,3, ...	gray	Entry of channel numbers	Entry of parameter-settings
MENU SELECT	blue	Menu key for calling up and exiting onscreen menus	Channel selection
CH▲	blue	Selects the next larger channel number or the preceding line of the onscreen menu	Selects/marks a field of the onscreen menu
CH▼	blue	Selects the next lower channel number or the following line of the onscreen menu	Selects/marks a field of the onscreen menu
▶	blue	Increases sound volume	Selects/marks a field of the onscreen menu
◀	blue	Reduces sound volume	Selects/marks a field of the onscreen menu or corrects an incorrect numerical entry
TV	blue	Selects television-set operation	
VCR	blue	Selects video-recorder operation	
SAT	blue	Selects analog satellite-receiver mode	Channel selection
DVB	blue	Selects digital satellite-receiver mode	Channel selection
MUTE	gray	Mutes the sound track	
SET	gray		Saves a channel selection
FAV(LT) RCL	gray	Digital mode: Calls up display of the channel list (listed in the preferred order) Analog mode: Recalls the low-threshold setting for resetting	

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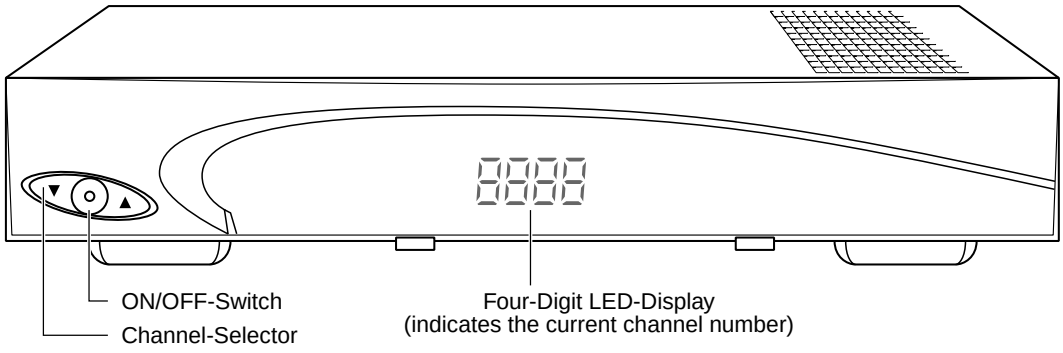
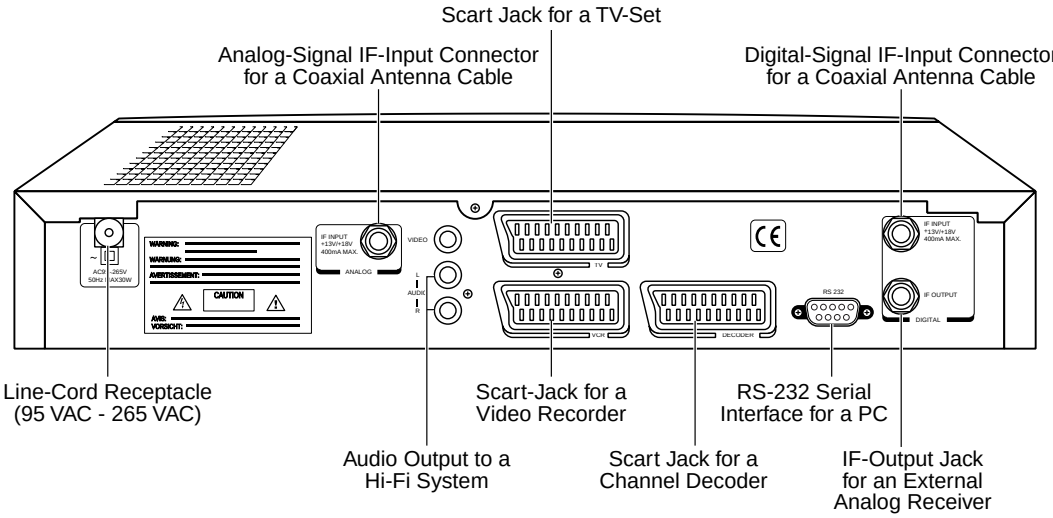
Key		Function During:	
Marking(s)	**Color**	**Operation**	**Installation**
EXIT(STO) REV	gray	Digital mode: STOP, exit the current menu Analog mode: N/A	Deletes an entry or effects a return to the preceding menu Saves the settings made
BACK ◀◀	gray	Analog mode: Selects blue screen VCR: Fast rewind	
AUD(#) ▶	gray	Digital mode: Selects audio mode VCR: Play	
LAST(T A/B) ▶▶	gray	Digital mode: Selects the last channel viewed VCR: Fast forward	
RADIO(W) ❚❚	gray	Digital mode: Toggles TV/Radio VCR: Pause	
GUIDE(SAT) ■	gray	Digital mode: Calls up the program guide VCR: STOP	
INFO(E) ●	gray	digital: Calls up further channel information VCR: Record	
A/D	gray	Toggles analog/digital mode	
VCR OUT	gray	Selects video output (via the Scart jack)	

4.2 The Receiver Unit



Controls and displays on the receiver's front panel



Connectors on the receiver's rear panel

5 Installing the Receiver

5.1 Prerequisites and Ambient Conditions

NOTE:

Keep the receiver well away from sources of heat and locations where it might be subjected to bright sunlight.

Route all cabling such that it will not become damaged by, e.g., sharp edges.

Connect the receiver to a 230 VAC (± 10%), 50 Hz, electrical outlet.

The antenna assembly should have been installed and aligned in accordance with its manufacturer's instructions.

All information needed for programming the receiver's digital section should be readily available:

- the local time zone (the departure from CET, or GMT in the UK and Ireland),
- whether standard time or daylight-savings time is currently in effect
- the aspect ratio of the television set to be employed
- the LNB local-oscillator frequency that applies to your locality (which must be entered into the field entitled "LNB Local Freq.")
- if the receiver is to be manually programmed, the channel frequencies and symbol rates for the channels to be programmed (available from satellite-television magazines or dealers).

The receiver consists of an analog section (analog receiver) and a digital section (digital receiver).

The analog receiver is ready for immediate use, since it has been preprogrammed at the factory. However, you may make any changes that may be necessary by following the programming instructions to be given below.

The digital receiver, on the other hand, must be programmed by users prior to use in accordance with the instructions to be given below.

5.2 Connecting the Receiver to the Satellite Antenna and Other Equipment

The receiver may be operated with either a single satellite antenna or a pair of satellite antennae. You will have to manually set the receiver to either single-antenna or dual-antennae mode, depending upon whether you will be connecting it to one satellite antenna or a pair of satellite antennae using one or two (coaxial) antenna cables, respectively. To perform this setting, proceed as follows:

NOTE:
Before proceeding, correctly connect the receiver to the video recorder, television set, any further (analog) receivers to be employed, and then to an electrical outlet.

- Press the blue DVB-key on the remote control. The red indicator lamp (LED) on the remote control will briefly illuminate.

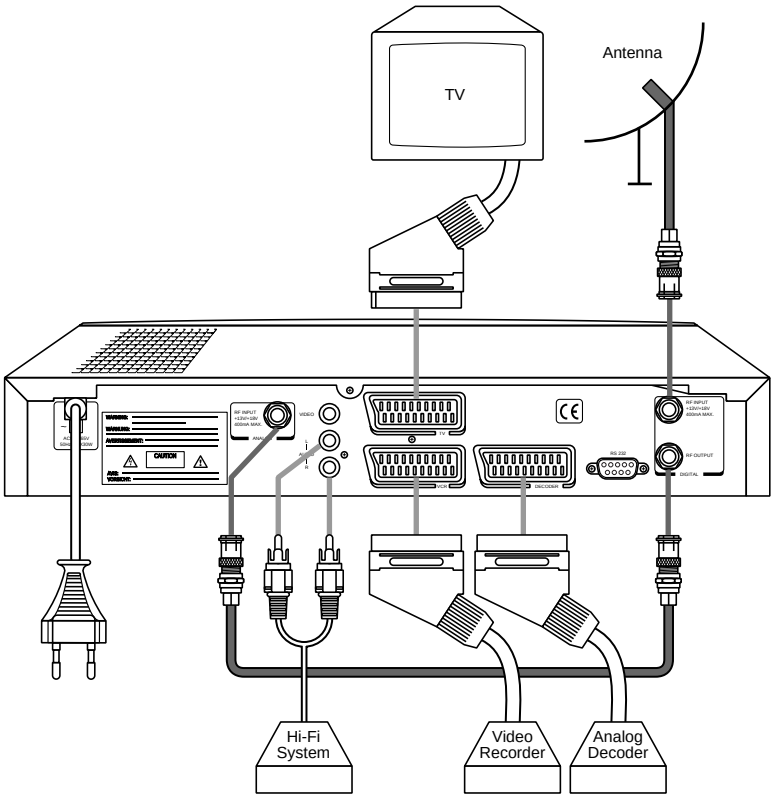
- Press the A/D-key on the remote control and hold it depressed for 3 seconds, which will switch the receiver to standby mode..

- Use the ◀ or ▶ keys to select either SING (single-antenna mode) or DUAL (dual-antennae mode).

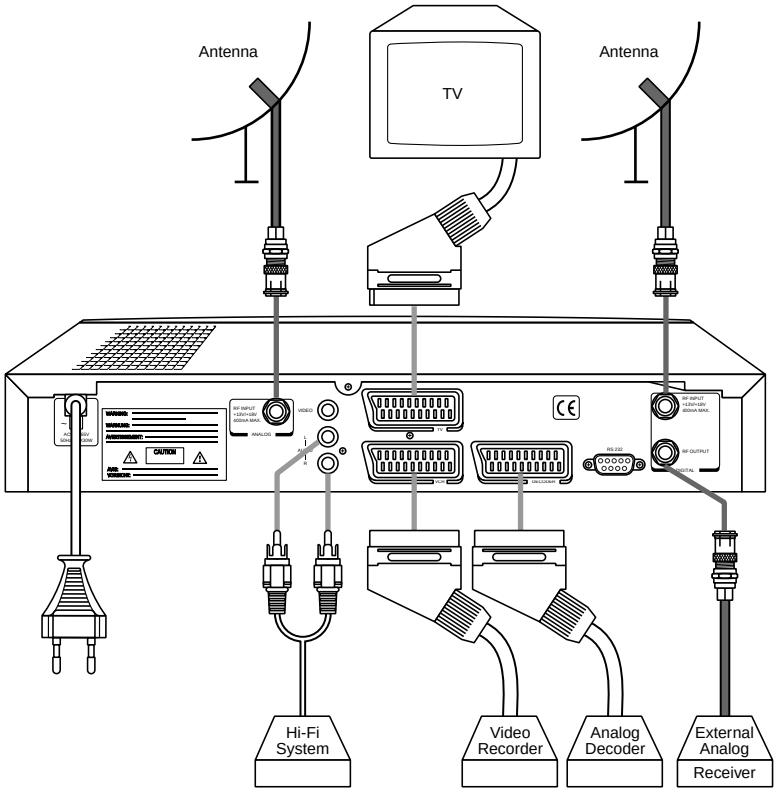
- Press the ON/OFF key.

- If the receiver is to be operated in single-antenna mode, use the coaxial cable supplied with the receiver to interconnect the "IF OUTPUT DIGITAL" and "IF INPUT ANALOG" jacks on its rear panel (cf. Section 5.2.1, below).

5.2.1 Single-Antenna Operation



5.2.2 Dual-Antennae Operation



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6 Programming and Operating the Analog-Receiver Section

- Switch the receiver on by pressing the ON/OFF-key.

A/D

- Press the A/D-key on the remote control in order to switch from using the receiver's digital section to using its analog section.

BACK

NOTE:
You may suppress the picture for the current channel and obtain a blue screen by pressing the BACK-key, if desired. The system menu will be displayed onscreen even in the absence of an input signal.

MUTE

- You may also suppress the sound track for the current channel by pressing the MUTE-key, if desired, in which case the message "SOUND OFF" will appear onscreen. Pressing the MUTE-key a second time will restore the sound track.

6.1 Setting the Basic Parameters from the System Menu

- Simultaneously press the ▲ and ▼ keys on the receiver's front panel while the receiver is in standby mode and hold them depressed for 3 seconds.

The following menu will then be displayed onscreen:

SYSTEM MENU

LANGUAGE	**:**	**ENGLISH**
DRO SHIFT	**:**	**00.00MHZ**
LNB FREQ.	**:**	**9.75GHZ**
SMATV	**:**	**OFF**

- Use the ▲ and ▼ keys to shift the cursor to the desired position (the highlighted display line).

- Use the ◀ and ▶ keys to select the desired setting.

- Select the desired language (Deutsch, English, Français, Italiano).

- Select an LNB-local-oscillator frequency of 9.75 GHz/10.00 GHz.

- Adjust the local-oscillator frequency in steps of 0.25 MHz until it agrees with your LNB (the available frequency-adjustment range is ± 15.00 MHz).

- Select "ON" if you intend to use the receiver's SMATV-feature (DiSEqC Version 1.0)

EXIT(STO)
REV

- Press the STORE-key.

The data have now been saved and the receiver will automatically switch off.

6.2 Preselecting Channels from the Main Menu (Display Page 1)

- Press the MENU-key on the remote control while the receiver is switched on.

The following menu will then be displayed onscreen:

```
          MAIN MENU

> CHANNEL   :  400
  BAND      :  KU-09.75GHZ
  FREQ.     :  12150.00MHZ
  POLARITY  :  HORZ.
  22KHZ     :  OFF
  DECODER   :  NO
  CONTRAST  :  5
  P. LOCK   :  OFF
```

- Either use the ◀ and ▶ keys to select a channel/broadcaster, or

- enter a 3-digit channel number.

- If necessary, reset the local-oscillator frequency (5.15 GHz/9.75 GHz or 10.00 GHz/10.60 GHz).

If your antenna is capable of receiving C-band broadcasts, you may reconfigure the receiver setup in order to allow receiving them by using a setting of C-05.15 GHz.

- Use the ◀ and ▶ keys or the numerical keys to adjust/reset the channel frequency to the desired value (cf. the addendum for a list of available channel frequencies).

- Select either horizontal or vertical polarization.

- Switch the 22-kHz control frequency ON or OFF.

- Select the desired decoder status (NONE/MAC/PAL1/PAL2).

- Select the desired picture contrast.

- Switch the child-protection feature ON in order that the channel selection can only be altered by a numerical entry, and can no longer be altered using the ▲ and ▼ keys.

While the cursor (>) is in the bottom display line, you may use the ▼ key to switch to the next menu. While it is in the top display line, pressing the ▲ key will return you to the preceding menu.

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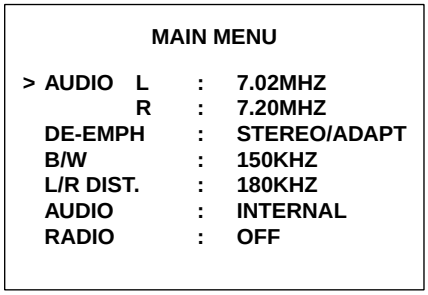
6.3 Preselecting Channels from the Main Menu (Display Page 2)

- Press the ▼ key to exit Display Page1 and call up Display Page 2.



- Use the ◀ and ▶ keys or numerical keys to adjust/reset the left-channel audio-subcarrier frequency.

Before the right-channel audio-subcarrier frequency can be adjusted or reset, L/R must be set to “FREE.” To make this adjustment, proceed as follows:

- Use the ◀ and ▶ keys or the numerical keys to set the desired right-channel audio-subcarrier frequency.

- Select audio deemphasis and the desired bandwidth:

  STEREO/ADAPT – MONO/ADAPT –
  MONO/50u – MONO/J17.

If the deemphasis parameters have been set to “MONO,” you may select an audio bandwidth of 150/280/400/600 kHz.

- Set the L/R channel separation to “FREE” or 180 kHz.

If this has been set to “FREE,” the bandwidths of the left and right audio channels may be independently adjusted or reset. If it has been set to 180 kHz, the bandwidth for the right channel will automatically track that set for the left channel.

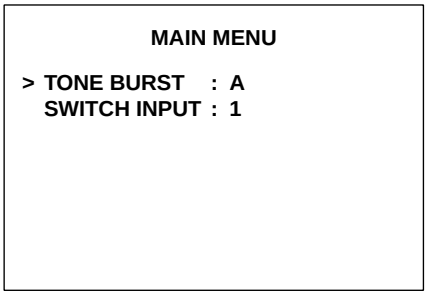
- Select “AUDIO EXTERNAL” (i.e., via a Scart loop) or “AUDIO INTERNAL,” which will only be possible if “DECODER” has been set to a setting other than “NONE.”

- Select “RADIO ON” if you would like to have a black screen while listening to the radio.

6.4 Preselecting Channels from the Main Menu (Display Page 3)

The settings of Display Page 3 should be altered by a trained specialist only.

- Press the ▼ key while the cursor is in the bottom display line to transit from Display Page 2 to Display Page 3:



- Reset DiSEqC to A or B.

- Switch the SMATV-feature ON if you want your receiver to receive DiSEqC-signals, which will only be possible if the SMATV-feature has been enabled from the system menu.

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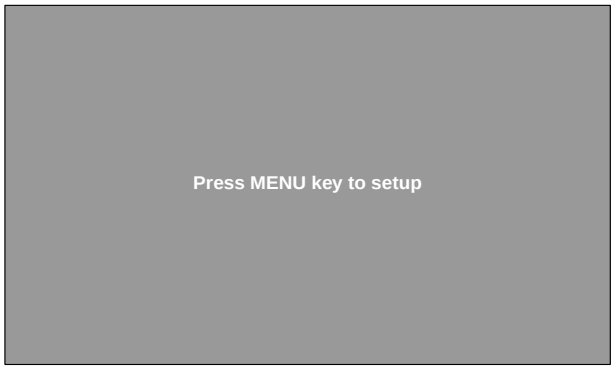
7 Setting Up and Programming the Digital Receiver

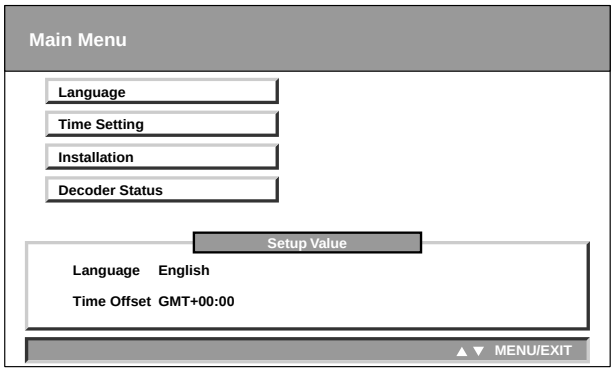
7.1 Switching On the Receiver

- Actuate the ON/OFF switch on the receiver.

  The display will indicate “ON” to indicate that the receiver is on, and the following display page will appear onscreen:

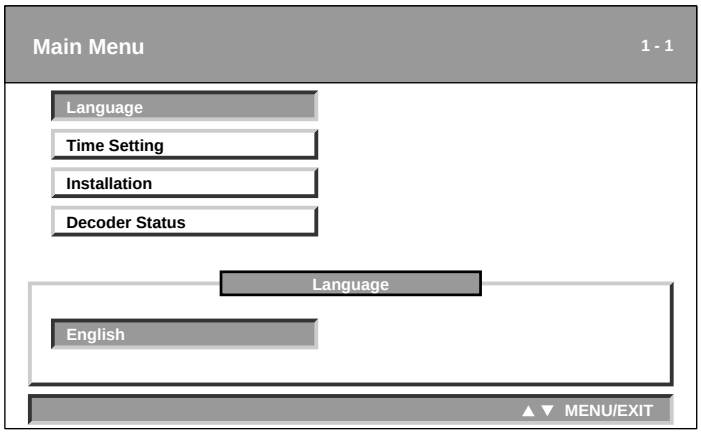


- Press the MENU-key on the remote control. The following menu will then be displayed onscreen:



7.2 Language Selection

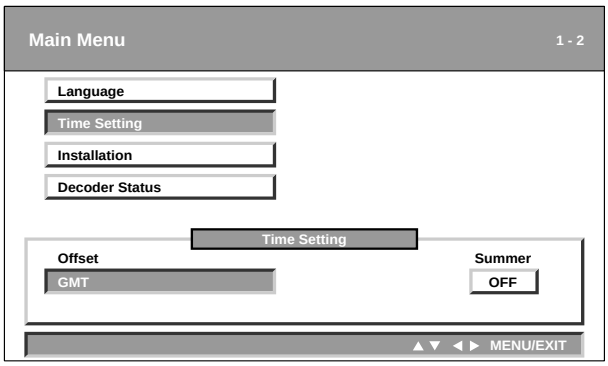
- Use the ▲ and ▼ keys to highlight the “Language” field, as shown below:



- Press the MENU-key on the remote control.
- Use the CH▲ and CH▼ keys to bring the desired choice of language (Deutsch/English/Français/Italiano) into the field at the bottom of the screen.
- Press the MENU-key to confirm your selection or the EXIT-key to abandon the current selection and make another selection.

7.3 Setting the Correct Local Time

- Use the CH▲ and CH▼ keys (designated by ▲ or ▼ below and in the other sections to follow) to highlight the “Time Setting” field, as shown below:

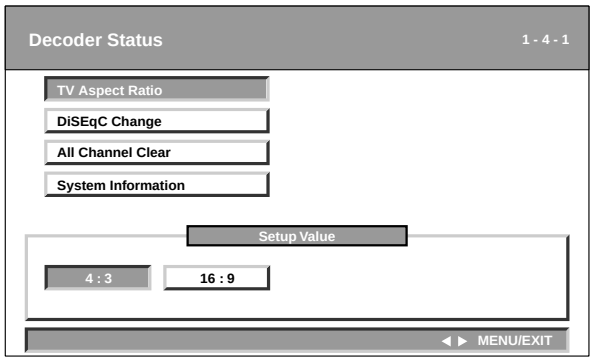


- Press the MENU-key to enable altering the value of “OFFSET.”
- Use the ▲ and ▼ keys to select the offset for your time zone (cf. the addendum).
- Use the ◄ and ► keys to select “SUMMER” (daylight-savings time).
- Use the ▲ and ▼ keys to switch “SUMMER” (daylight-savings time) ON/OFF.
- Press the MENU-key to confirm your selection.

7.4 Setting Decoder Status

Selecting the TV Aspect Ratio:

- Use the ▲ and ▼ keys to highlight the “Decoder Status” field.
- Press the MENU-key.
- Use the ▲ and ▼ keys to highlight the “TV Aspect Ratio” field.
- Press the MENU-key.



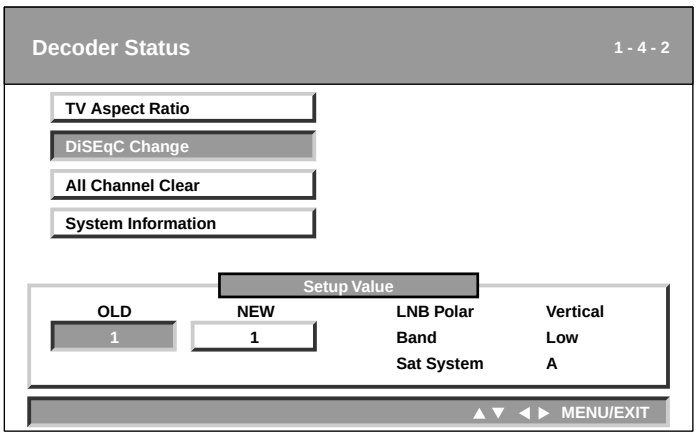
- Use the ◄ and ► keys to select the aspect ratio, 4:3 or 16:9, for your television set.
- Press the MENU-key to confirm your selection.

Changing the DiSEqC:

NOTE:
You will not be able to work with the Digital Satellite Equipment Control (DiSEqC) unless your satellite system is equipped with a DiSEqC-switch.

CAUTION:
This feature is used for reconfiguring receiver setup when changes have been made to an existing DiSEqC-distributor. These settings should thus be altered by trained specialist personnel only.

- Use the ▲ and ▼ keys to highlight the “DiSEqC Change” field.

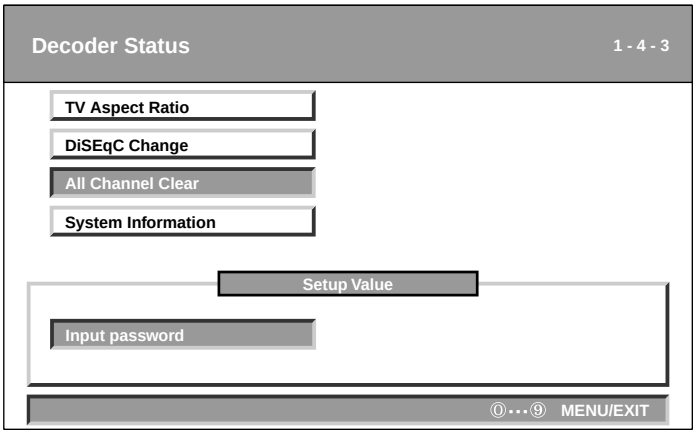


- Press the MENU-key.
- Use the ▲ and ▼ keys to highlight the “OLD” DiSEqC-setting.
- Use the ◀ and ▶ keys to transit to the “NEW” field.
- Use the ▲ and ▼ keys to select the new DiSEqC-setting.
- Press the MENU-key to confirm your selection.
- Press the EXIT-key.

Clearing the Receiver’s Memory:

CAUTION:
If this procedure is performed, all saved settings will be deleted and the receiver will have to be reprogrammed.

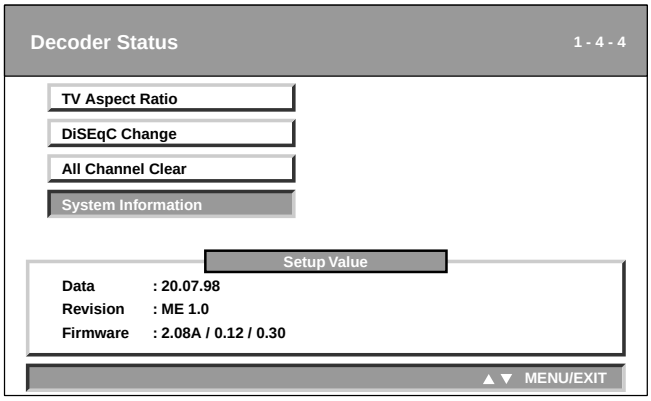
- Use the ▲ and ▼ keys to highlight the “All Channel Clear” field.



- Press the MENU-key.
- Use the numerical keys to enter the number “9815” (the password).
- Press the MENU-key to confirm that all stored data should be cleared from the receiver’s memory.

Information on Decoder Status (System Information):

- Use the ▲ and ▼ keys to highlight the “System Information“ field.



The displayed data concerns the revision of the decoder firmware current at the time the receiver was manufactured, which might be of value if the receiver should ever require servicing.

- Press the EXIT-key to exit the “Decoder Status“ menu.

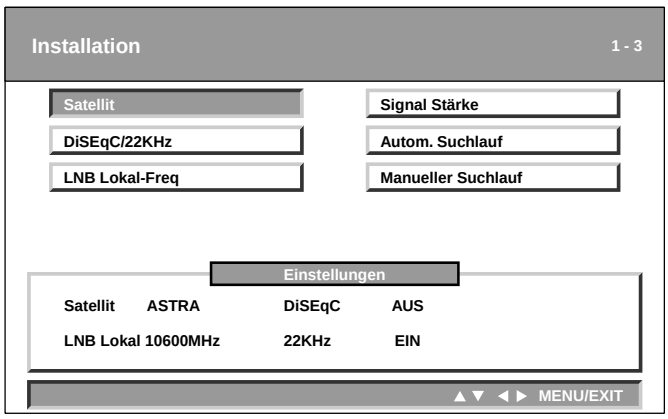
7.5 Automatic Channel Preselection

7.5.1 Selecting the Satellite to be Used

NOTE:
Four satellites have been factory preprogrammed. Contact your dealer or a television repair shop specializing in satellite-television systems if you would like to have further satellites programmed.

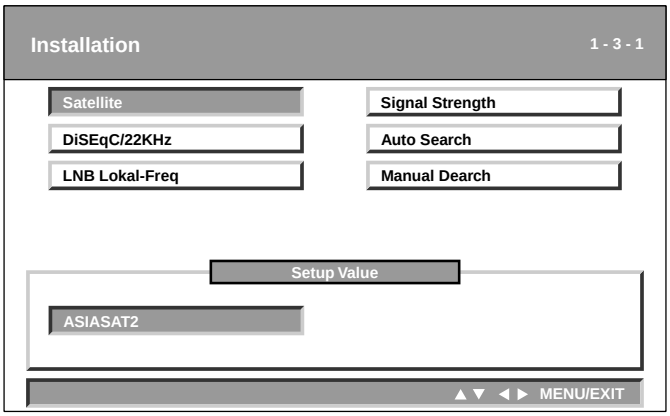
- Use the ▲ and ▼ keys to highlight the “Installation“ field.

- Press the MENU-key.



- Use the ▲ and ▼ keys to highlight the “Satellite“ field.

- Press the MENU-key and then use the ▲ and ▼ keys to select one of the following satellites: ASTRA/EUTELSAT 13°/ASIASAT2/PANAMASAT2.



- Press the MENU-key to confirm your choice.

You may now preselect the desired channels for the particular satellite that you have selected.

7.5.2 Adjusting the DiSEqC-Controller and/or the 22-kHz Control Signal

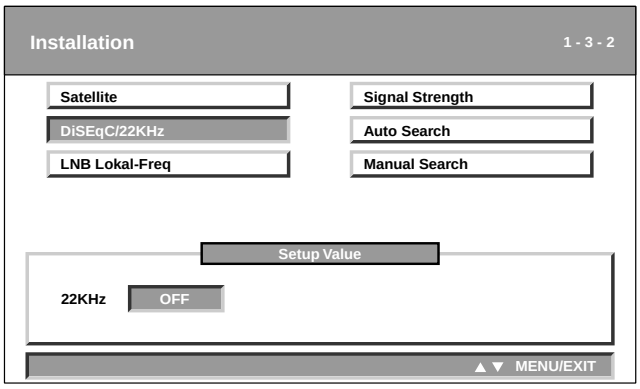
NOTE:
This adjustment is used for selecting the correct segment of the frequency bands. The DiSEqC-controller, which may be used only if the satellite system in use is equipped with a DiSEqC-switch, incorporates the correct settings for all of the various parameters involved: upper/lower band, horizontal/vertical polarization, and the type of satellite system involved.

In the event that the satellite system involved is not DiSEqC-controlled, the setting for “Upper/Lower Band” will have to be manually entered by toggling the “22kHz“ setting ON/OFF.

Most commercially available satellite systems employ so-called “general-purpose” LNB’s where a setting of “22 kHz ON” will automatically effect a switch to the upper band, where all digital satellite channels will be found (the factory default setting is 22 kHz ON).

- Use the ▲ and ▼ keys to highlight the “DiSEqC/22kHz“ field.

- Press the MENU-key:



- Use the ▲ and ▼ keys to toggle the “22kHz“ setting ON/OFF or select the DiSEqC-controller required.

- Press the MENU-key to confirm your choice.

CAUTION:
These settings should be altered by specially trained personnel only.

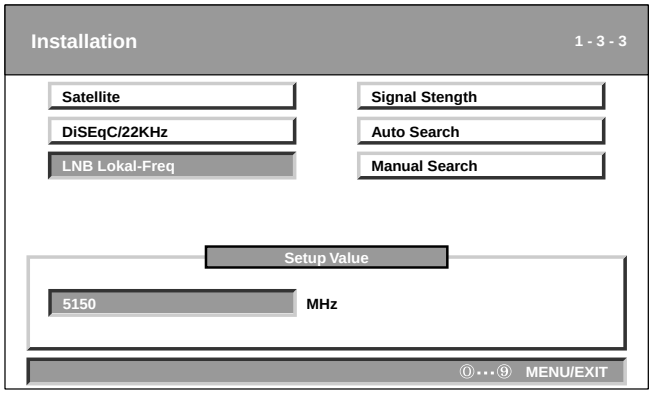
In order to be able to receive the greatest possible number of channels, you will have to repeat the automatic-search procedures (cf. Section 7.5.5, below) for each and every available DiSEqC-setting and for both settings of the 22-kHz control signal {ON/OFF).

GB

7.5.3 Entering the Low-Noise Block (LNB) Converter's Local-Oscillator Frequency

Commercially available satellite systems employ so-called "general-purpose" LNB's that employ a local-oscillator frequency of 10,600 MHz for their upper band. In the event that your LNB uses some other local-oscillator frequency, you may set up your receiver to accommodate it as follows:

- Use the ▲ and ▼ keys to highlight the "LNB Local Freq" field:
- Press the MENU-key.

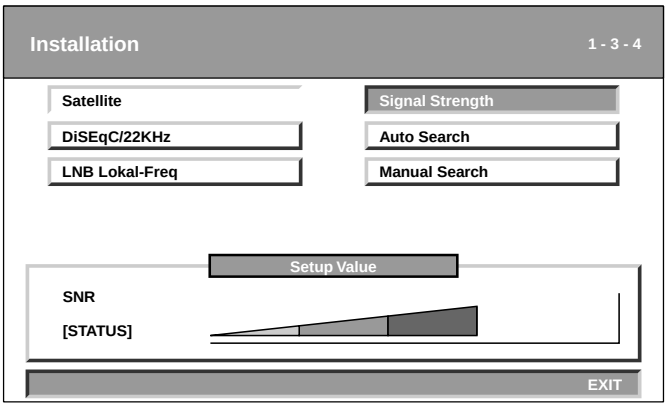


- Use the numerical keys to enter the local-oscillator frequency employed by your LNB.
- Press the MENU-key to confirm your entry.

7.5.4 Checking Signal Strength

You should check the alignment of your satellite antenna on a regular basis if you want to have the best-possible reception.

- Use the ▲ and ▼ keys to highlight the "Signal Strength" field and then press the MENU-key.



The legend "[STATUS]" will appear onscreen for a few seconds, when it will be replaced by "[LOCK]," accompanied by a triangular figure. If the latter has only yellow and red segments, then the received signal strength is weak.

- Cautiously realign the antenna until the triangular figure reaches maximum size.

You will then have the best-possible reception of the broadcast signal.

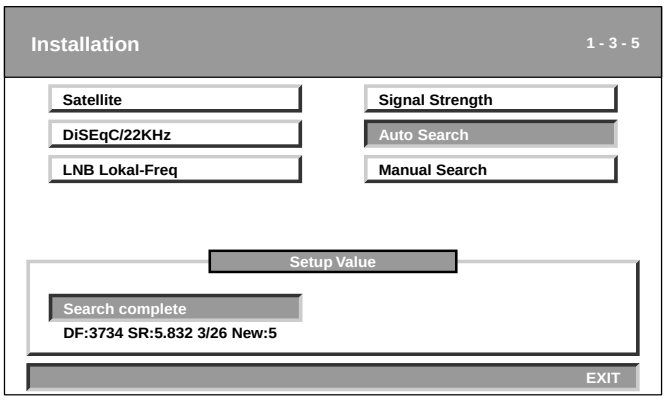
If the legend “[UNLOCK]” should appear following “[STATUS],” check the cabling interconnecting the antenna and the receiver and the parameter settings covered in the preceding sections.

- Press the EXIT-key to exit this menu.

7.5.5 Automatic Channel Search

Once the settings covered under Sections 7.5.1 through 7.5.4, above, have all been made, you may conduct an automatic channel search over those downlink frequency bands that have been set.

- Use the ▲ and ▼ keys to highlight the “Auto Search“ field:



- Press the MENU-key to start the search.

While the search is in progress, a clock will appear at the lower right-hand corner of the screen. You will also see a blue bar indicating the extent of the frequency band that has thus far been searched. The other items appearing onscreen have the following meanings:

DF: .... - The satellite down-link frequency involved
SR:.... - The symbol rate
.../... - The ratio of the total number of transponders found to the total number of transponders available within the preset frequency band involved
New:... - The total number of new channels saved to the receiver’s memory

When the search has been concluded, the clock will disappear from the screen and the message “Search OK“ should appear onscreen. If instead of this message the message “Search fail” should appear onscreen, then the settings made above will have to be checked, one after the other, in the order in which they were made and corrected wherever necessary until the search is successful.

- Press the EXIT-key to exit this menu and view a list of those channels that were found.

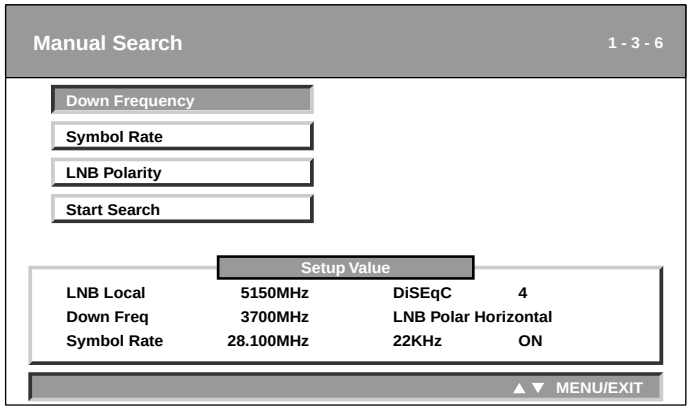
GB

7.6 Manual Channel Preselection

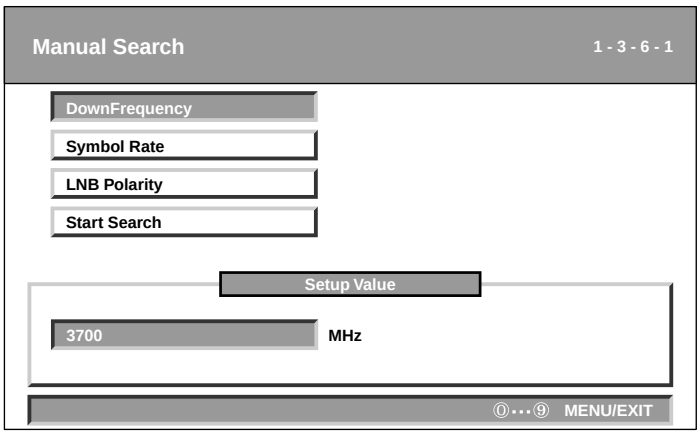
7.6.1 Entering the Downlink Frequency

Once the settings of Sections 7.5.1 through 7.5.4, above, have been concluded, you may manually preselect any of the channels falling within the various preset downlink frequency bands, as follows:

- While in the “Installation“ menu, use the ▲ and ▼ keys to highlight the “Manual Search” field.
- Press the MENU-key.
- Use the ▲ and ▼ keys to highlight the “Down Frequency” field:
- Press the MENU-key to confirm your selection.

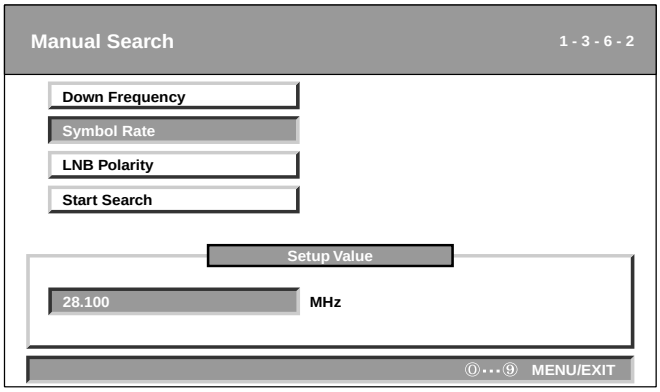


- Use the numerical keys to enter the desired downlink frequency (refer to satellite-television magazines for lists of the downlink frequencies of the various broadcast channels).
- Pressing the EXIT-key will delete the entire entry.
- Pressing the ◀ key will delete the rightmost digit of the entry.
- Once the entry is correct, press the MENU-key to confirm it.



7.6.2 Entering the Symbol Rate

- Use the ▲ and ▼ keys to highlight the “Symbol Rate“ field and then press the MENU-key to confirm your selection.

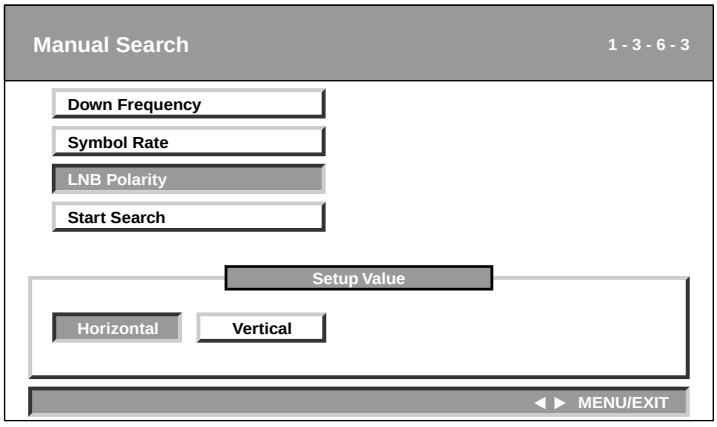


- Use the numerical keys to enter the desired symbol rate (SR) (refer to satellite-television magazines for lists of symbol rates).
- Pressing the EXIT-key will delete the entire entry.
- Pressing the ◀ key will delete the rightmost digit of the entry.
- Once the entry is correct, press the MENU-key to confirm it.

7.6.3 Selecting the Polarization

NOTE:
If a DiSEqC-controller is in use, this setting will be preset by the controller and thus need not be repeated.

- Use the ▲ and ▼ keys to highlight the “Polarization“ field.
- Press the MENU-key.



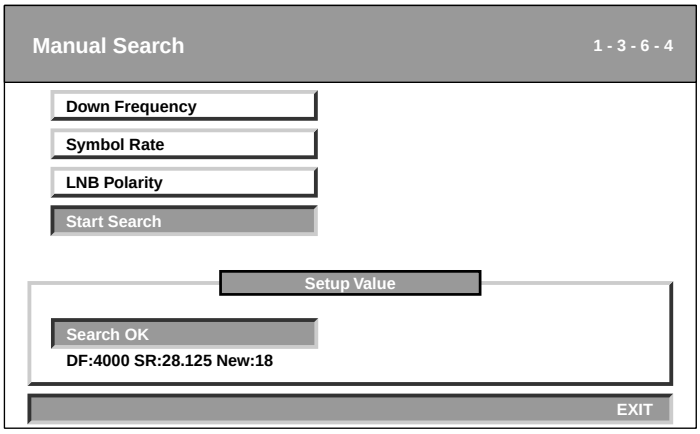
- Use the ◀ and ▶ keys to select either “Horizontal“ or “Vertical" polarization (listed in satellite-television magazines).
- Press the MENU-key to confirm your entry.

GB

7.6.4 Conducting a Manual Search

Once the settings of Sections 7.6.1 through 7.6.3, above, have been concluded, you may initiate a manual search.

- Use the ▲ and ▼ keys to highlight the “Start Search“ field.



- Press the MENU-key to start the search.

While the search is in progress, a clock will appear at the lower right-hand corner of the screen. You will also see a blue bar indicating the extent of the frequency band that has thus far been searched. The other items appearing onscreen have the following meanings:

DF: .... - The satellite downlink frequency involved
SR:.... - The symbol rate
New:... - The total number of new channels saved to the receiver’s memory

Once the search has been successfully concluded, the message “Search OK“ will appear onscreen.

- Press the EXIT-key to exit the menu and view the channel found.

If the search fails to locate a channel, one of the following error messages will appear onscreen:

“Tuning fail“	-	Check the symbol rate.
“Search fail“	-	Check the local-oscillator frequency, the signal strength, the 22-kHz setting, and the choice of satellite to be involved.
“No free channel“	-	Check the downlink frequency.
“Search cancel“	-	The search was cancelled by pressing the EXIT-key before the search could be concluded.

8 Operating the Digital Receiver

Once all of the above settings have been made, your receiver will be ready for use.

NOTE:
Digital television broadcasting involves the transmission and processing of large quantities of data. Switching from one channel to another thus takes a bit longer than in the case of analog television broadcasting.

An hourglass or the text message “Please wait” will appear onscreen during this waiting period.

8.1 Switching On the Receiver

- Press the ON/OFF-switch on the receiver’s front panel.

- Press the ON/OFF-key on the remote control.

GB

8.2 Channel Selection

- Use the numerical keys to enter the number of the desired channel (cf. also Section 8.3.1, below, regarding procedures for selecting channels from a list).

NOTE:
Although channel numbers invariably have 3 digits, e.g., 001, those with only one or two significant digits may be entered as single-digit or dual-digit numbers, e.g., 1 or 13. The receiver will have tuned in the selected channel after a delay of about 3 seconds.

- Use the ▲ or ▼ keys to select the next or preceding channel, respectively.

- Pressing the LAST-key will return you to the last channel viewed.

Each time you change the channel, the new channel number, date, day of the week, time of day, and the message “New channel change” will be displayed onscreen for a few seconds.

If the new channel’s downlink frequency is the same as that of the current channel, the new channel will be tuned in and the associated data displayed onscreen. However, if its downlink frequency differs from that of the current channel, the message “RF signal tuning” will appear onscreen while the new channel is being tuned in.

If the message “No signal“ appears in this menu, then the channel chosen cannot be received by your satellite antenna.

These onscreen messages will be deleted after about 3 seconds have elapsed or whenever the EXIT-key is pressed

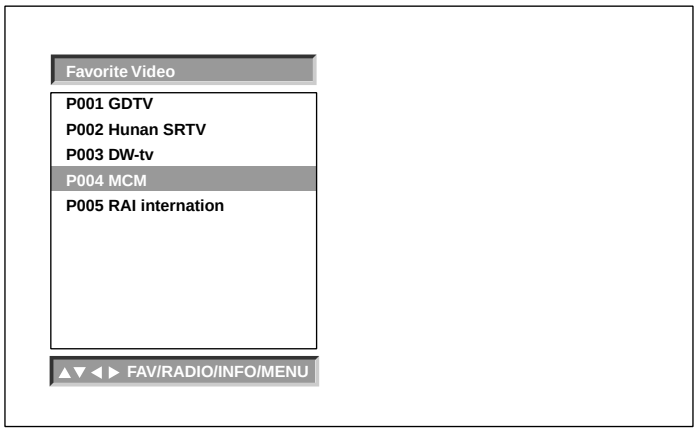
This menu displays the channel number and channel-tuning data, along with the current date, day of the week, and time of day.

8.3 Using Channel Directories

Due to the large number of digital television channels, channel directories are used for selecting channels and arranging them in preferred orders.

8.3.1 Displaying Channel Directories and Selecting Channels

- Press the FAV-key on the remote control while viewing a television program:



You will then have the following facilities available:

- Using the ◀ and ▶ keys to browse through the pages of the directories, each of which lists a total of 10 channels.
- Using the ▲ and ▼ keys for selecting channels.

- Using the numerical keys to enter channel numbers.
- Using the RADIO-key to switch to radio reception.
- Using the INFO-key to call up additional information on broadcast channels.
- Using the MENU-key to save your edited channel directories.

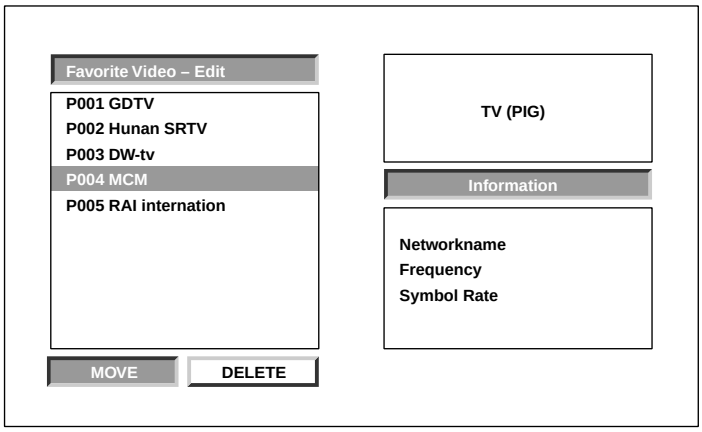
8.3.2 Editing Channel Directories (Arranging Channels in Preferred Orders)

The following data appear in both television-channel directories and radio-station directories.

NOTE:
The channel currently running in the background will change if its channel number is highlighted for several seconds.

- Pressing the FAV-key (“Favorite Menu” key) while a channel directory is displayed onscreen will allow you to create or edit a directory listing your favorite channels.

Moving Channels:



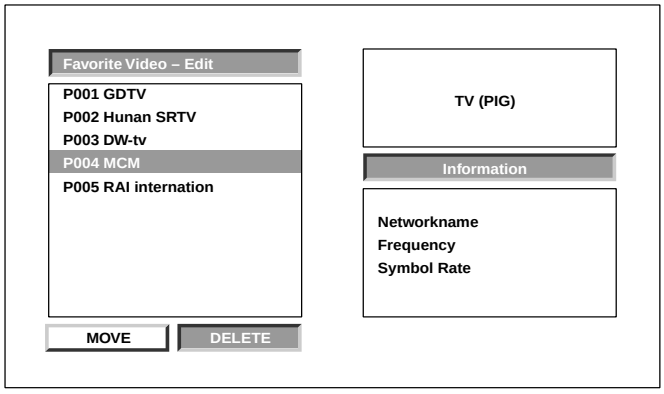
- Use the ◀ and ▶ to highlight the “Move” field.
- Press the MENU-key to confirm your selection.
- Either use the ▲ and ▼ keys to select the channel to be moved or enter its channel number using the numerical keys.
- Press the MENU-key to highlight the channel to be moved.

The channel involved will then be displayed in blue.

- Either use the ▲ and ▼ keys to the select its destination location or enter its channel number using the numerical keys.
- Press the MENU-key to move the channel to the destination location.
- Repeat the above procedures until all channels have been arranged in the desired order.
- Press the EXIT-key twice in succession to exit editing mode.

Deleting Channels:

- Press the FAV-key while a channel directory is displayed onscreen in order to enable deletion of one or more channels from that directory.
- Use the ◀ and ▶ keys to highlight the “Delete” field.
- Press the MENU-key to confirm your selection.



- Use the ▲ and ▼ keys to highlight the channel to be deleted.

- Press the MENU-key. The channel involved will be displayed in blue.

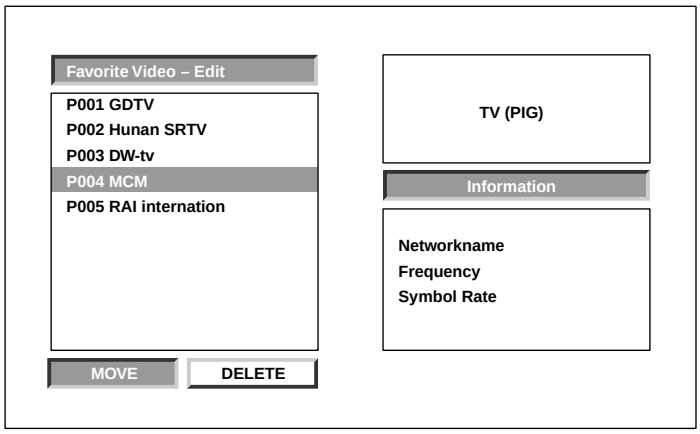
- Press the “1“-key to delete the channel, or press the “0”-key to abort the deletion procedure.

Repeat the above procedures, commencing with the selection of the channel to be deleted, until all channels to be deleted have been deleted..

- Press the EXIT-key to return to the “Edit” menu.

8.3.3 Obtaining Further Information on Channels

- Press the INFO-key while a channel directory is displayed onscreen.



The picture for the channel currently running will be displayed at the upper right-hand corner of the screen and further technical information on that channel will be displayed in the lower section of the screen.

8.4 Adjusting the Volume of the Sound Track/Muting

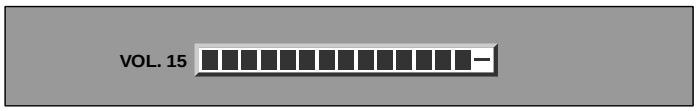
MUTE

- Press the MUTE-key to mute the sound track.

MUTE

- Either press the MUTE-key a second time or press the volume-control key (▶) to cancel muting and restore the sound track.

- Use the ◀ and ▶ keys to adjust the volume.



The volume setting will be displayed in terms of a range (MIN, 1 - 30, MAX).

The display will disappear from the screen if no volume adjustments have been made for several seconds.

GB

8.5 Radio Reception

In addition to digital television broadcasting, there are many radio stations that broadcast radio programs in digital Hi-Fi quality.

RADIO(W)

- Press the RADIO-key to switch from TV-mode to radio-reception mode.

- Use the ▲ or ▼ keys to select the radio station with the next higher or lower broadcast frequency, respectively.

LAST(T A/B)

- Press the LAST-key to return to the radio station that was last tuned in.

RADIO(W)

- Press the RADIO-key a second time to return to TV-mode.

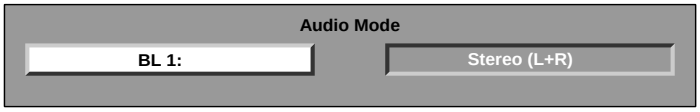
All of the facilities available for creating and editing television-channel directories may also be used for creating and editing radio-station directories while in radio-reception mode.

8.6 Selecting a Language and Audio Mode

Some radio station broadcast radio programs in several languages and/or audio modes.

AUD(#)

- Press the AUDIO-key and then press one of the ◀ or ▶ keys to highlight the left-hand field in order to select one of the languages broadcast by the station.



- Use ▲ and ▼ keys to select the language desired.
- Press one of the ◀ or ▶ keys to highlight the right-hand field.
- Use the ▲ and ▼ keys to select one of the following options:

Stereo (L+R)	–	Left and right stereo channels
Mono1 (L+L)	–	Left stereo channel only
Mono2 (R+R)	–	Right stereo channel only
Swap (R+L)	–	Left and right stereo channel interchanged

AUD(#) ▶

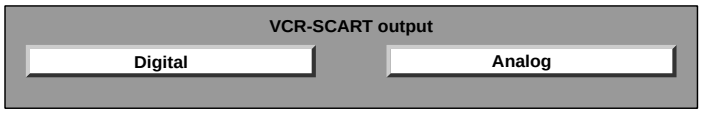
- Press the AUDIO-key a second time to confirm your selection.

8.7 Using the Receiver With a Video Recorder

This feature will be needed if you intend to operate the receiver in dual-antennae mode and record television programs on a video cassette recorder (VCR). The VCR-output jack will then transmit information on whether the television program to be recorded is coming from the receiver's analog or digital section.

VCR OUT

- Press the VCR OUT-key to access the menu items used or selecting the type of signal to be sent to the VCR Scart-output jack.



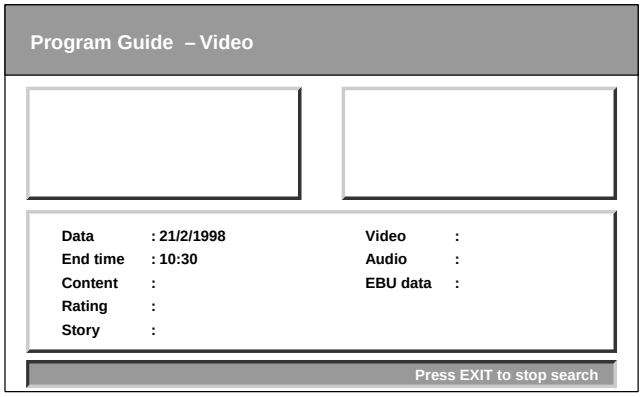
- Use the ◀ and ▶ to select the type of signal (output signal from the receiver's analog or digital section) to be made available at the VCR-Scart output jack.
- Press the MENU-key to confirm your selection.

8.8 Onscreen Program Guides

In addition to broadcasting digital video and audio signals, television broadcasters have the option of transmitting information on their programming schedules in the form of a data stream. Pressing the GUIDE-key will call up this information for display onscreen.

GUIDE(SAT) ■

- Press the GUIDE-key while watching a television program to call up the following display page (this facility is unavailable during radio reception):



This information largely consists of programming schedules, along with additional information provided by broadcasters, such as:

Video Format:
4:3
16:9
16:9 (pan vector)
> 16:9

Audio Mode:
Single mono
Dual mono
Stereo
Multilingual
Surround sound

EBU-Data:
Teletext subtitles
Teletext
Subtitles
Subtitles (4:3)
Subtitles (16:9)
Subtitles (2.21:1)

Content:
Movies/drama
News
Shows/game shows
Sports
Children's programs/programs for young people

Music/dance
Art/cultural programs
Social matters/politics/business
Educational programs/science
Recreation
Special topics

Approved for:
Children over 7 years old

GB

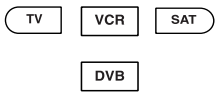
9 Programming the Remote Control

The remote control may be programmed using two different methods, either by entering a three-digit manufacturer's code (manufacturer's ID) taken from the addendum or by means of a systematic search.

Method 1: Entering the Manufacturer's Code:

Step 1: Press the SET-Taste and hold it depressed for about 3 seconds until the red LED illuminates.

Step 2: Press the key for the type of device to be controlled:



SAT	Analog satellite receivers
DVB	Digital satellite receivers
TV	Television sets
VCR	Video cassette recorders

Step 3: Look up the manufacturer's code for the particular model to be controlled in the addendum, which will be listed under the manufacturer's name. If more than one code is listed, try out each of them in turn.

Switch on the device to be controlled.

Point the remote control at that device.

Enter (one of) its three-digit manufacturer's code(s) using the numerical keys. The device will switch off if the code entered is the correct one.

Step 4: Press the SET-key to save the entry. The red LED will blink three times and then be extinguished.

If nothing happens, repeat Steps 1 through 4 using another choice of manufacturer's code.

Method 2: Systematic Search:

Step 1: As for Method 1.

Step 2: As for Method 1.

Step 3: Switch on the device to be controlled.

Point the remote control at that device.

Repeatedly press the red ON/OFF-key and continue repeatedly pressing it until the device switches off.

NOTE:
Many devices are rather slow to switch off. You should thus wait a few seconds to see if the device switches off between presses of the ON/OFF-key.

SET

Step 4: Press the SET-key to save the setting. The red LED will blink three times and then be extinguished.

If nothing happens, repeat Steps 1 through 4.

When programming of the remote control has been concluded:

TV VCR SAT DVB

- Press the blue key for the type of device to be controlled.
- The red LED will briefly illuminate. You may then use the remote control for controlling the device, as specified in the table of Section 4.1, above, for the particular type of device involved.

10 Troubleshooting Tips

Problem	Possible Cause(s)	Suggested Remedies
Remote control inoperative.	The batteries are discharged.	Replace the batteries.
	The wrong blue key was pressed.	Press the blue key for the particular type of device involved.
	The remote control is not pointed at the device to be controlled.	Point the remote control at the device involved.
No picture, but the onscreen menu is present.	The satellite system is defective, the antenna is misaligned, or the LNB is defective.	Check the satellite-antenna cable and all connectors. Realign the antenna. Check the LNB.
White/black snow on several channels (analog reception only).	The antenna is misaligned.	Realign the antenna. Fine tune the receiver-LNB from the System menu.
	High signal attenuation on the cable connecting the receiver to the satellite antenna.	Replace the satellite-antenna cable or use a signal amplifier.
	The LNB is defective.	Replace the LNB.
	Bad contacts at one or more connectors (water has gotten into them or their contacts are corroded).	Repair or replace the connector(s) involved.
Snow still present following fine tuning (analog reception only).	The satellite antenna employed is too small or the LNB is defective.	Replace the antenna with a larger one. Replace the LNB.
Audio interference (analog reception only)	Audio frequency incorrectly set.	Set the correct audio frequency.

11 Disposing of the Receiver, Its Packagings, and Accessory Items

The satellite receiver, its packagings, and its batteries are not household waste and must be disposed of separately. Inquire with your local authorities regarding applicable regulations and proper disposal procedures and, if you must dispose of them, do so in accordance therewith.

You should save all packagings for later use in the event that the receiver must be transported, e.g., if you move house, or sent in for repair, since only they provide the necessary degrees of protection.